UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
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JUN 2 2 2017

CERTIFIED MAIL /RETURN RECEIPT REQUESTED
Article Number: 7015 0920 0000 8688 5313

Mr. Alvin E. Crespo
Director
Environmental Health and Safety
Bristol-Myers Squibb Manufacturing Company
Humacao Operations
P.O. Box 609
Humacao, Puerto Rico, 00792-1255

Re: Technical Review April 14, 2017 RCRA Corrective Action Program Quarterly Progress Report No. 66 1st Quarter 2017 for the Bristol-Myers Squibb Manufacturing Company, Humacao, Puerto Rico
EPA ID Number: PRD 090021056

Dear Mr. Crespo:

The United States Environmental Protection Agency-Region 2 (EPA) has reviewed the April 14, 2017 RCRA Corrective Action Program Quarterly Progress Report No. 66 1st Quarter 2017 (Report), submitted by Bristol-Myers Squibb Manufacturing Company (BMSMC) for its facility in Humacao, Puerto Rico. Enclosed are the EPA's comments on the Report. Please provide your response to the enclosed comments within 30 days of receipt of this letter. If you have any questions regarding this correspondence, please contact Socorro Martinez of my staff at (787) 977-5886 or via email at martinez.socorro@epa.gov.

Sincerely,

Carmen R. Guerrero-Pérez
Director
Caribbean Environmental Protection Division

cc: Manuel O. Claudio Rodriguez, Manager,
Land Pollution Control Program, PREQ

Enclosure

RCRA CORRECTIVE ACTION PROGRAM
QUARTERLY PROGRESS REPORT NO. 66
1ST QUARTER 2017

BRISTOL-MYERS SQUIBB MANUFACTURING COMPANY

HUMACAO, PUERTO RICO

I. INTRODUCTION

The following is an evaluation the RCRA Corrective Action Program Quarterly Progress Report No. 66 1st Quarter 2017 for the Bristol-Myers Squibb Manufacturing Company (BMSMC) facility in Humacao, Puerto Rico. Specific concerns regarding this progress report are provided below.

II. GENERAL COMMENTS

1. As previously noted in our review of the On-site Surface Soil Sampling and Analysis Plan (SAP), BMSMC proposed developing naturally occurring and anthropogenic background threshold values (BTVs) for the Former Brule Incinerator, FTF Area, and Building 5 Area using an arithmetic mean of contaminants detected from three background surface soil samples and the arithmetic mean of contaminants detected from each area (or SWMU). However, USEPA recommends a minimum of ten samples be collected and utilized for background data sets and that BTVs be statistically developed per the *USEPA ProUCL Version 5.0.00 User Guide*. In addition, a source-area-specific 95% upper confidence level (UCL) on the mean concentration or a point-by-point comparison should be made to determine whether contaminants exceed background. Thus, an insufficient number of background and source-area-specific surface soil samples were collected by BMSMC and additional background samples are needed to adequately develop BTVs.

   In addition, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and/or indeno(1,2,3-cd)pyrene were detected in the three anthropogenic background surface soil at concentrations significantly higher than the nine area-specific surface soil samples collected from the Former Tank Farm Area, Former Brule Incinerator Area, or Building 5 Area. The elevated detections of these polyaromatic hydrocarbons (PAHs) analytes in the background samples relative to the area-specific samples indicate that these results may not be representative of background and reinforces the previous comments that a larger data set is needed to establish BTVs.

2. Although indoor and ambient air samples were collected at Building 30, sub-soil gas samples were not collected at Building 30. Indoor air, ambient air, **and** sub-slab soil gas samples were collected at all other buildings in the vapor intrusion program. Please clarify why the sampling approach/strategy was different for Building 30 than Building 8, Building 13, Building 15, and Building 18 and provide the rationale for why sub-slab soil gas samples were not collected in this quarterly report.

3. Several reporting limits (RLs) for the sample results exceed their respective screening levels yet the text of the quarterly report does not mention this issue. For example, the 1,2-dibromoethane RL for

sub-slab soil gas sample B8SS-2 was 960 µg/m^3 which exceeds the screening level of 0.68 µg/m^3 (refer to Table 23). When RLs exceed the associated screening levels, it should be mentioned in the quarterly report along with an evaluation as to whether the data meets data quality objectives (DQO) and whether it is usable data for decision making purposes (e.g., concentrations are above/below the screening levels).

III. SPECIFIC COMMENTS

Section 3.1 Former Tank Farm Area, Pages 15-17 and Tables 2-3

4. The text states that: "No FTF [Former Tank Farm] COCs [Contaminants of Concern] were detected above their applicate groundwater concentration for vapor intrusion or groundwater screening levels." However, Table 2 indicates that the total xylene result for Monitoring Well MW-19 was 6,987 µg/L which is above the residential and industrial concentration for vapor intrusion screening level (290 and 1,200 µg/L, respectively). Please revise the text accordingly and shade the total xylene result for MW-19 on Table 2.

5. Tables 2 and 3 identify additional Contaminants of Potential Concern (COPCs) than are identified in the text. Thus, the following statement in the text needs to be revised to accurately reflect the COPCs as shown in the tables: "In addition to the COPCs that exceeded an RSL in at least one sample during 2016 included Benzene (1 sample), Vinyl chloride (1 Sample), 2-Methylnaphthalene (2 samples), and C9-C18 Aliphatics (2 samples)."

Section 3.3 Building 5 Area, Page 19

6. This section suggests the groundwater concentrations of acetone, benzene, ethylene benzene, methyl isobutyl ketone (MIBK), toluene, and total xylenes in the 2016 groundwater samples are significantly less than their respective pre-removal concentrations. However, no pre-removal data is presented in this quarterly report to support this general statement and thus, it seems out of context in this quarterly report. It is recommended that this statement be removed from the quarterly report and discussed in the revised Corrective Measure Study Report where both pre- and post-removal concentration data will be presented.

Section 3.5 Release Assessment Phase 2A Program, Page 22 and Table 20

7. The text indicates that no PAHs, semivolatile organic compounds (SVOCs), or organochlorine pesticides were detected above their respective groundwater screening levels. However, Table 20 does not present PAHs, SVOC, or organochlorine pesticide data or their associated screening levels. Please add this data to Table 20 and revise the text accordingly.

Table 11

8. The total xylene result for Monitoring Well A-1R4 in Table 11 is listed as 428.5 E µg/L with the E-flag denoting that this result exceeds that calibration range. This sample should have been diluted and re-analyzed by the analytical laboratory until the results were within the calibration range. Please explain why this sample was not reanalyzed by the laboratory or if the sample was reanalyzed please explain why the reanalyzed sample results were not reported.